

PROJECT DESCRIPTION

I. GENERAL:

THIS PROJECT INVOLVES CHANGING THE EXISTING INTERSECTION CONTROL BEACON TO LED FULL COLOR SIGNAL OPERATION WITH VIDEO DETECTION CAMERAS AND NON-INVASIVE PROBES FOR FULL ACTUATION AT MD 6 (CHARLES STREET) AND WHEATLEY/ PENNS HILL ROADS IN CHARLES COUNTY. THE EXISTING SIGNAL EQUIPMENT, SHIELD ASSEMBLY SIGNS, STREET LIGHTING SHALL REMAIN AND THE EXISTING BASE- MOUNTED CABINET SHALL BE UTILIZED. AN EASTBOUND "SIGNAL AHEAD" HAZARD IDENTIFICATION BEACON SHALL BE INSTALLED APPROXIMATELY 1230' WEST OF THE INTERSECTION.

MD 6 IS ASSUMED TO RUN IN AN EAST- WEST DIRECTION.

II. INTERSECTION OPERATION:

THE INTERSECTION SHALL OPERATE A NEMA FOUR- PHASE, FULL- ACTUATED MODE, WITH THE ADVANCE "SIGNAL AHEAD" STRUCTURE'S SIGNAL HEADS FLASHING CONTINUOUSLY BUT POWERED SEPARATELY.

III. SPECIAL NOTES:

A NEMA EIGHT-PHASE, FULL-ACTUATED CONTROLLER WITH ALL NECESSARY EQUIPMENT HOUSED IN A BASE-MOUNTED CABINET AT THE INTERSECTION SHALL BE MODIFIED.

THE CONTRACTOR SHALL INSTALL AND LABEL, TERMINATING ALL CABLES INTO THE EXISTING CONTROLLER. SHA SIGNAL SHOP SHALL BE ON SITE; CONTRACTOR SHALL CONTACT MR. EDWARD RODENHIZER AT 410-787-7652 AT LEAST 3 DAYS PRIOR TO THE CABINET WIRING.

PROJECT CONTACTS

THE CONTACT PERSONS FOR THE SHA ARE AS FOLLOWS:

MRS. KIMBERLY TRAN
ASSISTANT DISTRICT ENGINEER-TRAFFIC
PHONE: 410-842-1003

MR. JOHN MAYS
ASSISTANT DISTRICT ENGINEER-
MAINTENANCE
PHONE: 410-841-1039

MR. JOE HORTY
DISTRICT UTILITY ENGINEER
PHONE: 410-841-1005

MR. JAMES FOLDEN
DISTRICT CONSTRUCTION ENGINEER
PHONE: 410-841-1031

MR. ROBERT SNYDER
ASSISTANT DIVISION CHIEF,
TRAFFIC OPERATIONS DIVISION
PHONE: 410-787-7631

MR. EDWARD RODENHIZER
CHIEF, SIGNAL OPERATIONS SECTION
PHONE: 410-787-7652

BILL STROUD
PROJECT MANGER -
TRAFFIC ENGINEERING
DESIGN DIVISION
PHONE: 410-787-4036

EQUIPMENT LIST "A"

A. EQUIPMENT TO BE SUPPLIED BY SHA AND INSTALLED BY THE CONTRACTOR.

ITEM NO.	QUANTITY	DESCRIPTION
9002	4 EA	NEMA LOAD SWITCH
9016	1 EA	4 CHANNEL DETECTOR AMPLIFIER
9037	1 EA	CABINET "G" TYPE POLE MOUNTED
9086	1 EA	VIDEO DETECTION INTERFACE EQUIPMENT: 1-4 CAMERAS
9570	100 SF	SHEET ALUMINIUM GROUND MOUNTED SIGN 3 EA W3-3MOD "NEW" SIGNAL AHEAD SYMBOL (36"x 36") WITH FLAGS 1 EA D3-2(2) LEFT ARROW, Penns Hill Rd/ Wheatley Rd, RIGHT ARROW/ NEXT SIGNAL" (VAR x 48") 1 EA D3-2(2) LEFT ARROW, Wheatley Rd/ Penns Hill Rd, RIGHT ARROW/ NEXT SIGNAL" (VAR x 48") 2 EA R2-1 "Yield" Sign (36" x 36") 1 EA R7-1(L) "NO PARKING ANY TIME", LEFT ARROW (24" x 18")
9571	9 SF	SHEET ALUMINIUM MAST ARM/POLE MOUNTED SIGN 1 EA W3-3 "SIGNAL HEAD" SYMBOL (36"x 36")

EQUIPMENT LIST "B"

B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR

ITEM NO.	QUANTITY	DESCRIPTION
1001	2 EA	MAINTENANCE OF TRAFFIC PER ASSIGNMENT
2002	1 CY	TEST PIT EXCAVATION
5002	250 LF	5" HEAT APPLIED WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKINGS
5003	90 LF	REMOVAL OF EXISTING PERMANENT PAVEMENT LINE MARKING - ANY WIDTH
5006	60 LF	24" HEAT APPLIED WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKINGS
8001	26 EA	12" LED SIGNAL HEAD SECTION
8011	1 EA	METERED SERVICE PEDESTAL
8020	4 EA	NON-INVASIVE DETECTOR, UP TO 1000' LEAD-IN CABLE
8021	1 EA	PEDESTAL POLE (ANY SIZE)
8022	1 EA	REMOVE AND DISPOSE MATERIAL AND EQUIPMENT- PER ASSIGNMENT
8027	2 EA	VIDEO DETECTION CAMERA AND CABLE UP TO 500'
8032	300 LF	SCHEDULE 80 RIGID PVC CONDUIT UP TO 4" - BORED
8034	900 LF	SCHEDULE 80 RIGID PVC CONDUIT UP TO 4" - TRENCHED
8035	162 LF	WOOD SIGN SUPPORTS UP TO 4" x 6"
8038	40 LF	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE
8043	20 LF	ELECTRICAL CABLE - 1 CONDUCTOR (NO. 4 AWG) - THHN/THWN
8044	13 EA	FURNISH AND INSTALL ELECTRICAL HANDHOLE
8045	100 SF	INSTALL GROUND MOUNTED SIGN
8046	9 SF	INSTALL OVERHEAD MOUNTED SIGN
8058	90 LF	ELECTRICAL CABLE - 5 CONDUCTOR (NO 14 AWG)
8059	750 LF	ELECTRICAL CABLE - 7 CONDUCTOR (NO. 14 AWG)
8066	1 EA	INSTALL CONTROLLER AND CABINET - POLE MOUNT

EQUIPMENT LIST "C"

ALL EQUIPMENT AND OTHER MATERIALS TO BE REMOVED BY THE CONTRACTOR SHALL BECOME THE PROPERTY OF THE CONTRACTOR.

WIRING DIAGRAM

A B C D	NON-INVASIVE PROBES WITH UP TO 1000' LEAD-IN CABLE
E F G H	5-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
J K L M N	7-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
O	STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)
P	1-CONDUCTOR ELECTRICAL CABLE (NO. 4 A.W.G.) - THHN/THWN
Q	VIDEO DETECTOR CAMERA WITH UP TO 500' LEAD-IN CABLE
EPD	EXISTING UNDERGROUND TELEPHONE DROP
ES	EXISTING UNDERGROUND ELECTRICAL SERVICE
PS	PROPOSED SERVICE
DZ	DETECTION ZONE
□	EXISTING HANDHOLE
■	PROPOSED HANDHOLE
⊞	PROPOSED METERED SERVICE PEDESTAL
+	GROUND ROD (3/4" dia x 10' length)

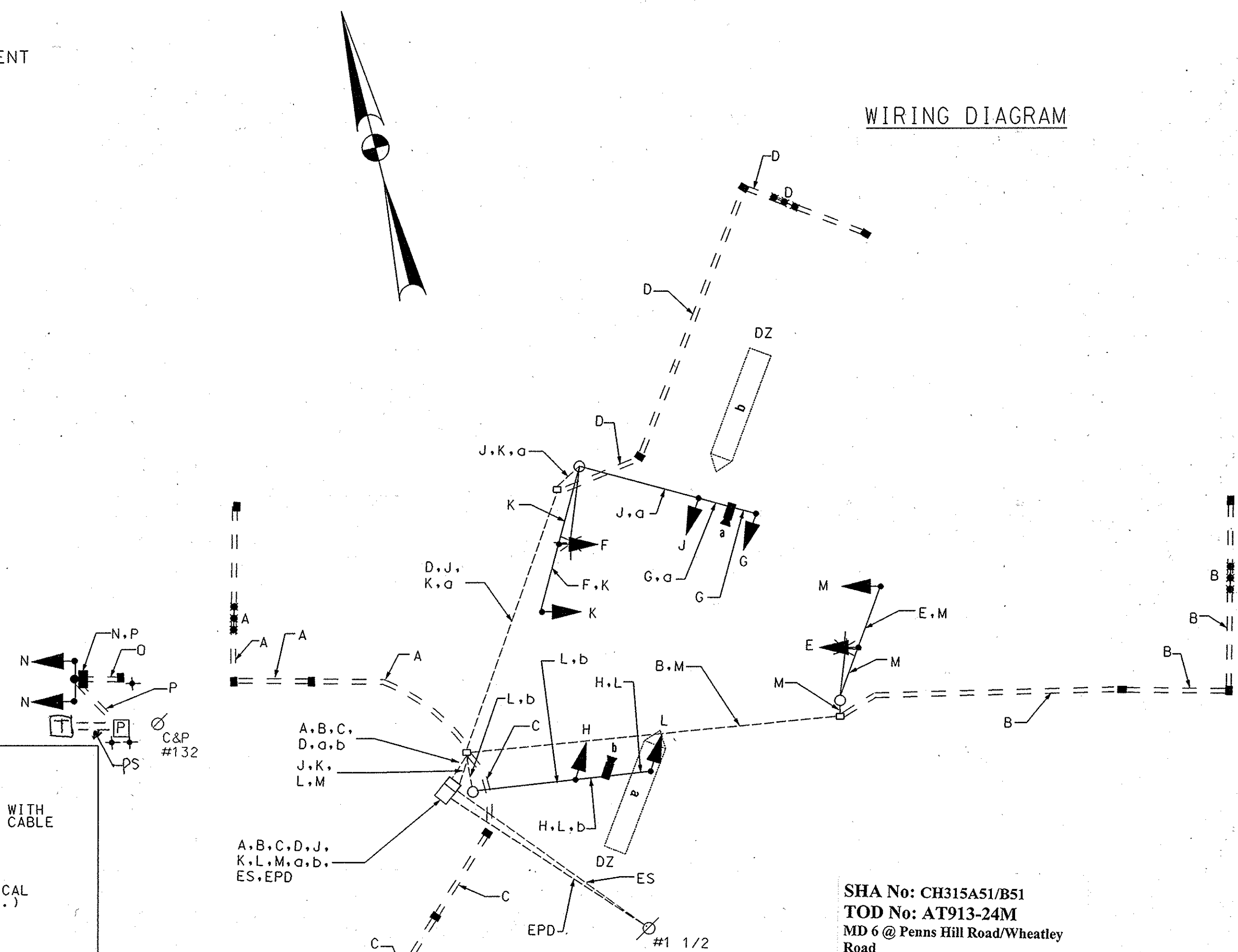
PHASE CHART

1*	2*	3	4	5	6	7	8	9	10
Y	Y	R	R	R	R	R	R	R	R
		Y	Y	Y	Y	Y	Y	Y	Y
		G	G	G	G	G	G	G	G

Phase 2 & 6	FL/Y	FL/Y	G	G	G	G	R	R	R	R	←
2 & 6 Change	FL/Y	FL/Y	Y	Y	Y	Y	R	R	R	R	→
Phase 4 & 8	FL/Y	FL/Y	R	R	R	R	G	G	G	G	↓
4 & 8 Change	FL/Y	FL/Y	R	R	R	R	Y	Y	Y	Y	↑
Flashing	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	↔
Operation	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	↔

* SIGNAL HEADS 1 AND 2 OPERATE SEPARATELY.

WIRING DIAGRAM



SHA No: CH315A51/B51
TOD No: AT913-24M
MD 6 @ Penns Hill Road/Wheatley
Road



STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION
MD-6 (CHARLES ST) AT PENNS HILL ROAD
AND WHEATLEY ROAD

GENERAL INFORMATION PLAN

SCALE NONE DATE JAN. 2008 CONTRACT NO. AT9135185

DESIGNED BY EMMENB COUNTY CHARLES
DRAWN BY EMMENB LOGMILE 08000632.11
CHECKED BY TROY M. HOLLOWAY T.I.M.S. NO. L-531
F.A.P. NO. TOD NO.

TS# 4153A - 02 OF 02 SHEET NO. 2 OF 2

CENTURY
ENGINEERING
CONSULTING ENGINEERS - PLANNERS
10710 GILROY ROAD
HUNT VALLEY, MD 21031

REVISION 'A' 25003.76

PLOTTED: FRIDAY, JANUARY 11, 2008 AT 03:12 PM
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